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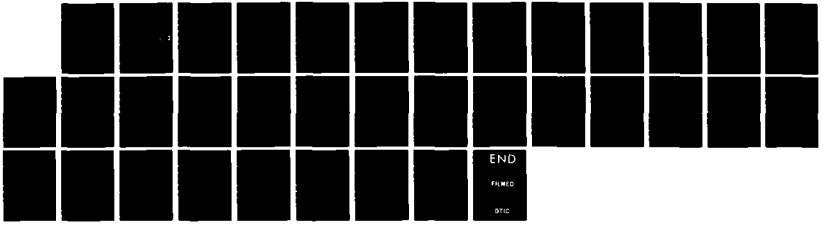

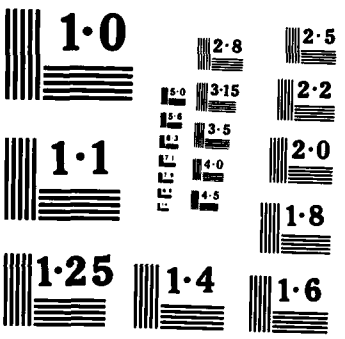

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AFIT, Wright-Patterson AFB OH

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COMPARISON OF THE AIR FORCE FEMALE AND MALE PILOT GROUNDED TIME IN THE AIR FORCE MILITARY AIRLIFT COMMAND

Judith Ann Holl, BSN
The University of Texas
Health Science Center at Houston
School of Public Health, 1985

Supervising Professor: Clayton Eifler, PhD

The US Air Force presently has over 200 female pilots, and the numbers are steadily increasing. This study is the first step in determining the effect of female pilots on the Air Forces' flying squadrons' efficiency and effectiveness. This protocol will compare the average number of days per year men and women pilots are grounded for medical reasons. The "Duty Not Involving Flying" time or DNIF statistics will be used for the data. There are no known studies indicating there is a significant difference in male/female pilot medical absenteeism rates. If the female DNIF rate is found to be significantly larger than the males, it may indicate an effect on the squadrons readiness abilities.

The Military Airlift Command (MAC) is chosen for sampling because a relatively large number of female pilots (96) are assigned to this command. The women will be compared to a representative sample of 288 male pilots also assigned to MAC. AF form 1041, which reports DNIF time to Command Headquarters, will be used to collect the DNIF days from the past year; age, rank, and marital status will also be collected. DNIF rates will be calculated correcting for person/months of observation. The age, rank, and marital status specific rates will also be compared.

AFIT RESEARCH ASSESSMENT

The purpose of this questionnaire is to ascertain the value and/or contribution of research accomplished by students or faculty of the Air Force Institute of Technology (AU). It would be greatly appreciated if you would complete the following questionnaire and return it to:

AFIT/NR
Wright-Patterson AFB OH 45433

RESEARCH TITLE: Comparison of the Air Force Female and Male Pilot Grounded Time in the Air Force Military Airlift Command

AUTHOR: Judith Ann Holl

RESEARCH ASSESSMENT QUESTIONS:

1. Did this research contribute to a current Air Force project?

( ) a. YES ( ) b. NO

2. Do you believe this research topic is significant enough that it would have been researched (or contracted) by your organization or another agency if AFIT had not?

( ) a. YES ( ) b. NO

3. The benefits of AFIT research can often be expressed by the equivalent value that your agency achieved/received by virtue of AFIT performing the research. Can you estimate what this research would have cost if it had been accomplished under contract or if it had been done in-house in terms of manpower and/or dollars?

( ) a. MAN-YEARS _____ ( ) b. $_____

4. Often it is not possible to attach equivalent dollar values to research, although the results of the research may, in fact, be important. Whether or not you were able to establish an equivalent value for this research (3. above), what is your estimate of its significance?

( ) a. HIGHLY SIGNIFICANT ( ) b. SIGNIFICANT ( ) c. SLIGHTLY SIGNIFICANT ( ) d. OF NO SIGNIFICANCE

5. AFIT welcomes any further comments you may have on the above questions, or any additional details concerning the current application, future potential, or other value of this research. Please use the bottom part of this questionnaire for your statement(s).

NAME GRADE POSITION

ORGANIZATION LOCATION

STATEMENT(s):

COMPARISON OF THE AIR FORCE FEMALE AND MALE PILOT GROUNDED TIME IN THE AIR FORCE MILITARY AIRLIFT COMMAND

By

JUDITH ANN HOLL, BSN

THESIS PROPOSAL

Presented to the Faculty of the University of Texas

Health Science Center at Houston

School of Public Health

in Partial Fullment

of the Requirements

for the Degree of

MASTER OF PUBLIC HEALTH

THE UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON
SCHOOL OF PUBLIC HEALTH
Houston, Texas
June, 1985

ACKNOWLEDGEMENTS

I want to express my gratitude to Dr. Alfonso Holguin, who helped me comprehend what I was really trying to study. Also, I wish to thank my advisors, Dr. Clayton Eifler, for sharing with me his knowledge of statistics in a way I could understand, and Dr. Spurgeon Neel, for his advise and feedback througout this undertaking.

I also would like to thank my fellow classmates for their constructive comments, especially Dr. Howard Gillis, whose painstaking review of this project proved to be invaluable.

Submitted 24 May 1985

TABLE OF CONTENTS

CHAPTER I

A. INTRODUCTION

Women started flying aircraft in the military during World War II as *Woman's Airforce Service Pilots (WASPS).* Unlike at present, women were not limited in the type aircraft they could fly. The *WASP's* fighter regiment alone carried out 4,419 combat missions, fought 125 air battles, and produced two aces. Their bomber regiments were also highly successful, dropping 3 million kilograms of bombs in 25,000 combat sorties.(6) Nevertheless, in 1944 when it was determined the need for female pilots no longer existed, the *WASP's* were disbanded and military aviation was virtually closed to women until the 1970's.

In August 1976, the first twenty females arrived at Williams Air Force Base in Arizona for the forty-nine week undergraduate pilot training program. From this beginning it was evident that the women were able to integrate into this male dominated occupation. To enter pilot training, women had to meet the same stringent physical standards as did men. One of their instructor pilots is quoted, "So far, our experience has been that it hasn't changed things at all. The women are going through exactly the same training as the men and are hacking it just as well."(6) Since that slow start of 20 women pilots in 1976, the Air Force's female pilot numbers have grown to several hundred strong. The other

military services are likewise increasing the numbers of women pilots for both fixed wing aircraft and helicopters.

With this increase in women pilots, many questions concerning the effects of their addition to a squadron have been raised. One of the most important considerations is how the addition of women has affected the squadron's performance and readiness. A direct effect could be that females are being grounded more frequently than the men for medical reasons. Consequently, the question asked in this proposal is: are female pilots grounded more days (DNIF-duty not to include flying) during the year for medical reasons than their male pilot counterparts?

B. LITERATURE REVIEW

In a thorough literature search, nothing has been found published on the comparison of morbidity for female and male pilots. This is not surprising since females were not allowed to enter the Air Force's undergraduate pilot training program until 1976.

Although the incidence of female pilot morbidity has not been described either separately or in conjuction with males, male pilots have been studied. One such study, carried out by the Naval Health Research Center in California in 1983, *Age-Specific Morbidity Among Navy Pilots(5)*, compares the morbidity rates by age of male Navy aviators with rates for three male control populations: nonpilot aircrew

officers, unrestricted line officers, and staff officers. Aircrew officers and pilots were shown to have the highest hospitalization rates of the four officer groups for both total admissions and for most of the 16 major diagnostic categories. The impetus for the study was: "Given the large investments of money and time involved in pilot training, it is clearly in the best interests of the Navy as well as the individual pilot to take all steps possible to enhance sound functioning of mind and body."(5) With this study the Navy hoped to find any gaps in their health surveillance and maintenance program for pilots.

Besides the limited studies on male pilot morbidity, research is being done on female performance as pilots at Brooks AFB, San Antonio, Texas. The Human Resourses Laboratory at Brooks conducted a study on female pilots performance, completed in 1979, by Dr. J. Kantor.(9) I interviewed Dr. Kantor in January 1985, hoping that he would be aware of any recent morbidity studies on female pilots. He stated that he did not think anything was being nor had been done on male or female pilot morbidity statistics in the Air Force for as long as he was aware.

After exhausting the military sources on female/male morbidity, more generalized information of male/female differences in reports of illness was sought. There is much documented on this, however from the occupational standpoint the information is limited. In 1975, Dr. Constance Nathanson

of Johns Hopkins School of Public Health summarized data from the U.S. and Great Britain concerning sex differences in morbidity(12). This study not only looked at women in employment but housewives as well. It stated that women live longer than men and have lower mortality rates for most causes of death but, statistics show, women report more physical and mental illness than men. The study did point out that among women, those that were employed had a lower sickness rate than housewives (controlling for age, occupational injuries, and puerperal illnesses). In 1983 a study on *Sex Differences in Reports of Illness* by Alfred Marcus etal.(10) from UCLA discussed possible hypotheses regarding traditional female exess in reported morbidity. This study confirmed that the role obligation of employment caused women to have lower morbidity than seen in their counterpart housewives. Overall this study did show women in general to have higher morbidity than men but it did not specifically compare employed men and employed women. Most of the studies (10,11,12,13) examined talked of the sex role theory to explain the differences in male/female morbidity. This theory takes into account the fact that women exhibit lower mortality rates than men yet show higher morbidity rates. According to the theory, inflexible female role obligations contribute to the male/female differences in reporting illness. It is stated in two of the studies, one by Marcus and Seeman (11), and the other by Nathanson

(12,13), that when controlling for such role obligations as employment, reductions are seen in the male/female differences. This fact is especially significant when considering male/female fliers since both would be equally employed.

Studies comparing absenteeism of male and female workers are limited but those found (16,19,20) agree that females show more illness behavior, indicated by work absences and visits to health services, than do males. Paringer (16) reports that in May 1978 women lost 4.3% of scheduled work time compared to 3.1% for men. She states that the large majority of unscheduled work absences annually are due to illness and injury-the average female worker lost 5.4 days from work for health reasons compared to 4.7 days for the average male worker in 1979.(16)

It has also been documented that women use more medical care than men even after controlling for obstetrical and gynecological care.(20) One explanation for this is that women may recognize and treat health problems sooner than men thus preventing more serious problems. Paringer states statistics show that although women are more likely to miss a day of work than men for illness, the amount of time lost per absence is lower for women than for men. Also, when rates for women and men of the same age, health, and marital status are compared, the absentee differential between men and women falls with age (US National Center for Health Statistics,

1974).(16)

It is evident by this extensive literature search and interviews that no research has been done on female pilot morbidity. I did discover, however, that the Air Force is keeping up-to-date on the crude statistics but are not analyzing or publishing them. These facts lead me to believe that there is a definite need for a study to analyze the data available and discover if there is any significant difference in male and female DNIF time loss.

C. OBJECTIVE

The objective of the proposed study is to determine the rate of DNIF time for male and female pilots in MAC during the past year. This data will show if there is any significant difference between male and female rates and if these differences are due to age, rank, or marital status. Once this is ascertained, a subsequent study could be performed to list and compare the grounding diagnoses for males and females, thus trying to assess causation for these differences in rates.

TIME AND FACILITIES BUDGET

Planning Phase
Jan-Mar 1986

Development and approval of protocol.
Submit protocol to *AFMSC/SGP* for approval.
Notify *MAC* Command of approval and request month of April for data collection.
Requirements:
- Investigator (author)
- Office
- Office equipment
  - desk
  - phone-military autovon available
  - typewriter/word processor
  - locking file (ensures confidentiality)
  - stationary and writing supplies
- Statistical consultant-assist with development of analysis of data and data collection coding.

Data Collection
April

Scott AFB, Illinois-*MAC* Command Headquarters
Requirements:
- Travel to and from Scott AFB, Illinois.
- Living accomodations for the amount of time needed to finish data collection.
- Office space on Scott AFB.

- Stationary and writing supplies.
- Data collection forms in sufficient quantitiy to tabulate 384 subjects.
- Two enlisted technicians to assist with data retrieval (from Scott AFB file records section).

Data Analysis
May

Load data into computer for sorting and analysis.
Requirements:
- Computer and programmer time.
- Office equipment at home base and supplies as listed above.

Publication
June

Requirements:
- Secretary to type and assemble the report, ready it for publication, and distribution.

CHAPTER IV

A. CONCLUSION

This proposal attempts to study the difference between male and female pilots in the number of days grounded for medical reasons. Presently there are no data concerning female pilot medical absentee rates. With the increasing presence of women in the cockpit, this type data is needed to be able to assess their impact on the flying squadron.

Mean DNIF rates, by sex, age, rank, and marital status, would be statistics that may show how women really fit into flying squadrons. These rates may also demonstrate how much pregnancy plays a role in female pilot DNIF rates. However, the results of this proposal would only be a stepping stone toward discovering what, if any, are the reasons for a difference in the male and female rates. This kind of data would benefit staffing planners and the flying squadrons themselves.

Precision of Data

Once the p-values are calculated from the data, stability will be determined by 95% confidence intervals (CI) for the mean number of days DNIF. The spread of the data will have a direct effect on these intervals in that the presence of outliers will lengthen the confidence intervals and make them less precise.

athletic, and physically superior women. Consequently, these women may be healthier than even the males in the general population. However, male pilots should also fit into this self selected group and therefore would be more readily comparable to the female pilots for DNIF time.

Another potential selection bias is the actual selection of the male group. The females are the entire female pilot population in MAC, whereas the men chosen will only be representative of the age and geographic distribution of females. Consequently, the rank and marital status distribution of men may not coincide with the female distribution. The major problem here is with marital status, as discussed earlier. An attempt will be made to correct for this problem by adjusting the data after collection for the percent of males in each rank and marital status.

The information bias most likly to be seen concerns the actual reporting of DNIF by flight surgeons. Each physician has some leeway in how they treat certain illnesses, ultimately this means that some physicians may ground a pilot for one disorder whereas another may not. There is no way to correct for this bias, but it is likely that the physicians at either extreme will cancel each other out and leave the majority of the physicians' diagnoses as the average.

of its use in the 1970's is that the female senior captains and majors are not as experienced as their male rank counterparts. Most likely, this discrepancy will not have any effect on the rank specific rates.

The data on marital status will most likely parallel the information on civilian females in the workplace. The statistics on working married women show that they have less absenteeism than married men.(17) However, it must be considered that the married female pilots may have the higher pregnancy rates also.

Bias

When comparing female and male pilots, some of the confounding variables normally associated with sex factors are eliminated. The vigorous physical standards that pilots must meet prior to being selected for flight training is the same across both sexes and the standards they must maintain to stay on flying status are also the same. Also, since both groups being compared are in the same job field, even flying the same aircraft, that potential bias is removed. The major confounding variables left are age, sex, socioeconomic status (rank), and marital status.

Selection bias may be inherent because the female population that is found in the pilot group is probably not comparable to the general female population. Female pilots are generally a self selected group of highly motivated,

CHAPTER III

A. INTERPRETATION

Results

When this study is actually carried out, the data may show that younger female pilots (20-30 year olds) have a higher DNIF rate than the males in the same age group, most likely due to obstetrical and gynecological problems. Whereas the older males (30-40 year olds) may show a higher rate than their female counterparts due to the onset of cardiovascular problems. Pregnancy will probably be seen as a significant cause of the higher DNIF rates for women because a women is grounded from the time her pregnancy is confirmed until after her four week convalescence. However, the data may show that the highly motivated, select group of females that choose to become pilots may opt to prevent pregnancy, and thus this factor may not prove to be highly significant.

When analyzing the rank specific data a few factors must be considered. When the Air Force began choosing its female pilots it looked to its already existing ranks, thus picking lieutnants and captains already on active duty. In contrast, the majority of male pilots in recent years have come from ROTC and the *Air Force Academy*, with small numbers coming from those already on active duty. This method of female pilot selection is no longer being used, but the consequences

The p-values will represent the probability that the differences in the two groups compared would be observed by chance alone. An *a-priori* p-value of less than .01 will be considered significant.

If the results of the skewness test fall between -1 and +1 then the data distribution is approximately normal, but if the statistic is less than -1 or greater than +1 the data will be interpreted as either skewed to the right or left respectively. Once this has been determined, the appropriate statistical method will be used to analyze the data.

The *Wilcoxon* rank sum test will be used if the data is found to be skewed. This procedure is not particularly influenced by "outliers" or by highly skewed data. The rank sum test is slightly less efficient than the pooled t-test with normal data, however this proceedure can be more powerful than the t-test when used on skewed data.(16) A Z-value is obtained which is looked up on a table to produce the resultant p-value. If the data is found to be reasonably normal, a two-sample t-test will be done. This test will also produce a p-value statistic.

An analysis of variance will be used to study the variation of the mean DNIF rates with the factors of sex, age, rank, and marital status. The main objective of this method is to assess the influence of each factor-sex, age, rank, and marital status-jointly and in the presence of the others, upon the number of days DNIF.(16) This analysis can test for sex differences; controlling for age, rank, and marital status. F-statistics will be calculated, and their corresponding p-values obtained.

Age Specific Rates:

number days DNIF/yr females 20-26yrs old
number days DNIF/yr males 20-26yrs old

number days DNIF/yr females 27-33yrs old
number days DNIF/yr males 27-33yrs old

number days DNIF/yr females 34-40yrs old
number days DNIF/yr males 34-40yrs old

Socioeconomic Rates (Rank):

number days DNIF/yr female lieutenants
number days DNIF/yr male lieutenants

number days DNIF/yr female captains
number days DNIF/yr male captains

number days DNIF/yr female majors
number days DNIF/yr male majors

Marital Status Rates:

number days DNIF/yr married females
number days DNIF/yr married males

number days DNIF/yr single females
number days DNIF/yr single males

The percentage of females and males in the different strata will be determined (appendix 3). These numbers will be used to rate-adjust each group if the distributions in the female group are found to be significantly different from the male group.

To determine which statistical method to use, the days DNIF will be plotted as a histogram, separately for males and females (appendix 4). This will examine the normality of the data. This distribution of data will then be tested for normality using the skewness score.

will be obtained from the *Military Personnel Center (MPC)* stating what pilots from MAC were moved in the test year. The actual number of days DNIF for each individual will be multiplied by the number of days the pilot was observed devided by the number of days in the year. The result is the number of days DNIF per year for each individual:

$$\text{DAYS DNIF} \times \frac{\#\text{Days observed}}{365}$$

This number of days DNIF for female pilots will be totaled. The number will be divided by the total number of females in the study group-96. The number of days DNIF for the male pilots will also be totaled and divided by the total number of males-288. These mean rates for each sex will be used to produce a morbidity ratio:

$$\frac{\text{number of days DNIF/yr.females}}{\text{number of days DNIF/yr. males}}$$

If the ratio it is not equal to one, additional statistical analysis will be performed to determine significance. A ratio greater than one suggests that the female DNIF rate is larger than the male. Additionally, the data will be stratified into specific rates for age, rank, and marital status.

The marital status and any other data that may be missing from the 1041 records of each individual will be obtained from *MPC*. The 1041's will be checked by selected bases each month, the names of the 288 men in the sample and 96 females will be located, and all information collected. These data will be logged on a data collection forms where the names of the individuals will be removed and coded. This step will not only assure confidentiality,but also simplify loading data into the computer for analysis.

Strict confidentiality will be used pertaining to all information obtained from the records review. The data collected will not be used for any purpose other than the study, and only aggregate results will be published. After the data are collected, individual names will be removed and the data coded. All information will be secured in a locked file.

B. ANALYSIS

The raw data collected (name and all variables-age, sex, rank, marital status, days DNIF per month, and base assigned) will be coded and placed into a computer. With the help of a computer programmer, the data will be sorted and analyzed.

The number of days DNIF for each individual will be adjusted for the number of days actually observed. Military members may be restationed during the year therefore a list

combined pilot group flying aircraft open to both men and women in *MAC*. Although this number is relatively small, the dependent variable of days DNIF is not a rare occurrence therefore a smaller number of people can be studied over a long period of time (one year) to produce reliable results.

Data Collection

The dependent variable is the number of days medically grounded per year for male and female pilots flying comparable aircraft assigned to *MAC*. This information is kept on file on the individual pilot's base on an AF form 1042. The 1042 (appendix 1) contains the pilots full name, rank, social security number, states whether the pilot is actively flying, and lists a general diagnosis. These forms are kept on file at each base for five years. Once a month each base must submit a summary of all DNIF's to command headquarters on a form 1041 (appendix 2), which lists the originating base, name, grade, social security number, date disqualifed from flying status, estimated duration of DNIF, and if so the date requalified for each pilot grounded that month. The 1041 is kept on file for five years at *MAC* headquarters, Scott AFB,Illinois, on all pilots. This form will be used to provide the data.

The number of days grounded, rank, age, and sex will be collected from the 1041 records on the male pilots selected by the random sampling and all female pilots.

because of the aircrafts' role in combat. The male comparison group will be selected from those men flying aircraft comparable to the women. Presently *MAC* has a total of 5434 pilots; 2453 male pilots flying those aircraft open to women, 2885 male pilots flying all other aircraft, and 96 female pilots. Lists of all pilots assigned to any one command are available through command headquarters and the *Military Personnel Center (MPC).* In the instance of *MAC*, command headquarters is at Scott AFB, Illinois. This list includes name, rank, social security number, marital status, and base assigned.

The total number of 96 female pilots will constitute the study group. The male group will be chosen from the 2453 male pilots flying aircraft open to women. A sample size three times the number of women will be selected as an age and geographic stratified random sample. The age strata will be 20-26, 27-33, and 34-40 year olds. Geographically, the same percentage of men will be chosen from a specific base as there are women chosen from that base. This method will ensure that a representative sample of the male group is chosen. The list of all pilots assigned to *MAC* obtained from Command Headquarters or *MPC* will make stratification by these variables efficient. Once selected, these 288 pilots will be listed by base and then alphabetically on a master file list. The total number of males and females in the group will be 384. This number represents approximately 15% of the

CHAPTER II

A. METHODOLOGY

Overview

A descriptive study of incidence is proposed. The data are the number of days DNIF for medical reasons for all pilots in the study group and will be collected by a historical prospective "records" review.

Air Force clearance will be needed from the *Air Force Medical Service Center/SGP* prior to carrying out the study. Also, *Military Airlift Command (MAC)* will be asked for permission to review their files (AF form 1041). Approval should be granted because the personnel are not inconvienced and the information gained will aid the Air Force in setting manning requirements at squadrons with a larger proportion of female pilots.

Population

As directed by Congress, female pilots in the military are allowed only to fly aircraft that do not directly participate in combat. Because of this regulation, I chose my pilot group from the Air Force's *Military Airlift Command (MAC)*, which accomplishes the majority of its missions out of direct combat situations, and thus it has a larger number of female pilots assigned.

Although many female pilots are assigned to *MAC*, there are aircraft in this command not available to female pilots

APPENDICES

MEDICAL RECOMMENDATION FOR FLYING OR SPECIAL OPERATIONAL DUTY LOG

MONTH AND YEAR	MEDICAL FACILITY

INDIVIDUAL ACTIONS

LAST NAME	GRADE	SSAN	RATING	AEC	UNIT–MAJCOM	DATE DISQUALIFIED	ESTIMATED DURATION	DATE QUALIFIED	DIAGNOSIS(ES)

APPENDIX 1

AF FORM [illegible] 1041

☆U.S. G.P.O. 1979-620

APPENDIX 2

MEDICAL RECOMMENDATION FOR FLYING OR SPECIAL OPERATIONAL DUTY

(THIS FORM IS SUBJECT TO THE PRIVACY ACT OF 1974 - Use Blanket PAS - DD Form 2005)

TO: FMO/Scheduling Officer (Unit)	FROM:	DATE

LAST NAME - FIRST NAME - MIDDLE INITIAL	GRADE	SSAN

RATING/FLYING DUTY	AFSC ACTIVE FLYING ☐ YES ☐ NO	ORGANIZATION AND MAJCOM OF ASSIGNMENT

THE ABOVE INDIVIDUAL HAS BEEN FOUND *(Check appropriate items)*

☐ MEDICALLY DISQUALIFIED FOR FLYING OR SPECIAL OPERATIONAL DUTY.

☐ MEDICALLY QUALIFIED FOR FLYING OR SPECIAL OPERATIONAL DUTY.

☐ MEDICALLY CLEARED FOR FLYING DUTY FOLLOWING:

☐ AIRCRAFT MISHAP ☐ INITIAL CLEARANCE *(This Base)* ☐ PERIODIC MEDICAL EXAMINATION

☐ REQUIRED TO WEAR GLASSES WHILE PERFORMING FLYING OR OTHER DUTIES REQUIRING CORRECTED VISUAL ACUITY.

(CONTACT LENSES ARE PROHIBITED UNLESS SPECIFICALLY AUTHORIZED.)

I CERTIFY that I have been notified and understand the above actions and recommendations

SIGNATURE OF FLYER OR INDIVIDUAL	DATE

DATE MEDICAL CLEARANCE EXPIRES

☐ RATED OFFICER: MEDICAL DISQUALIFICATION WILL NOT BE RESOLVED BEFORE THE FIRST DAY OF THE SIXTH MONTH FOLLOWING THIS DISQUALIFICATION.

☐ NONRATED OFFICER OR ENLISTED PERSONNEL: MEDICAL DISQUALIFICATION WILL NOT BE RESOLVED BEFORE THE FIRST DAY OF THE FOURTH MONTH FOLLOWING DISQUALIFICATION.

ACTUAL DATE FOUND MEDICALLY DISQUALIFIED	ESTIMATED DURATION OF DISQUALIFICATION	ACTUAL DATE FOUND MEDICALLY REQUALIFIED	TOTAL DAYS DISQUALIFIED THIS ILLNESS/INJURY

REMARKS

TYPED OR PRINTED NAME AND GRADE OF FLIGHT SURGEON	SIGNATURE	DATE

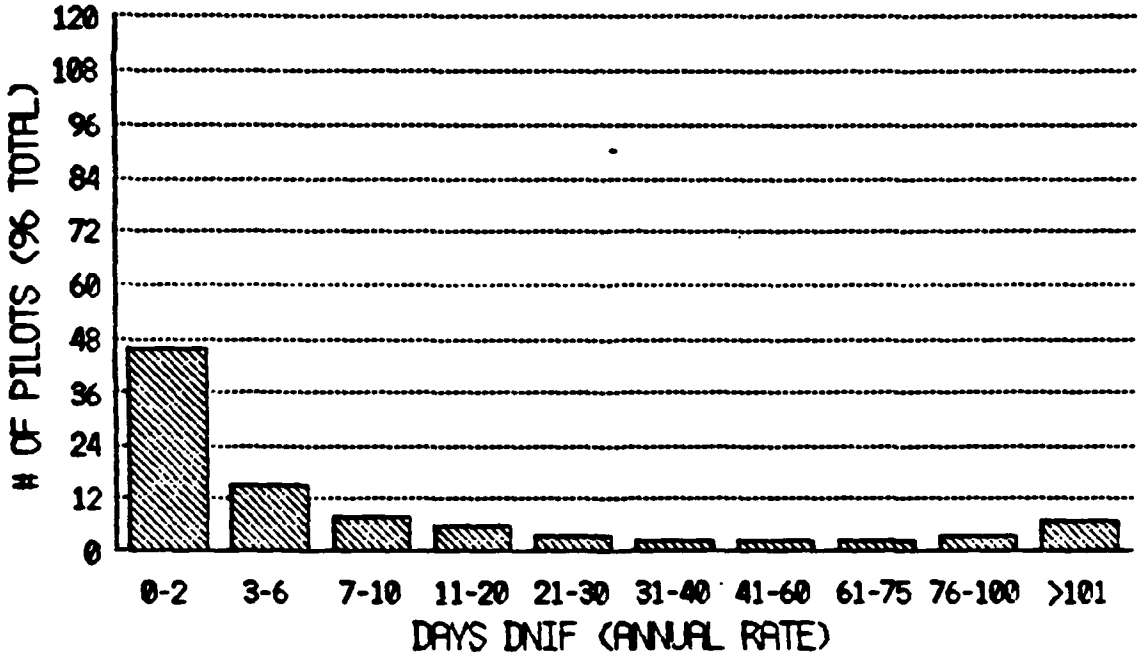
AF FORM 1042 AUG 79 PREVIOUS EDITION WILL BE USED.

APPENDIX 3

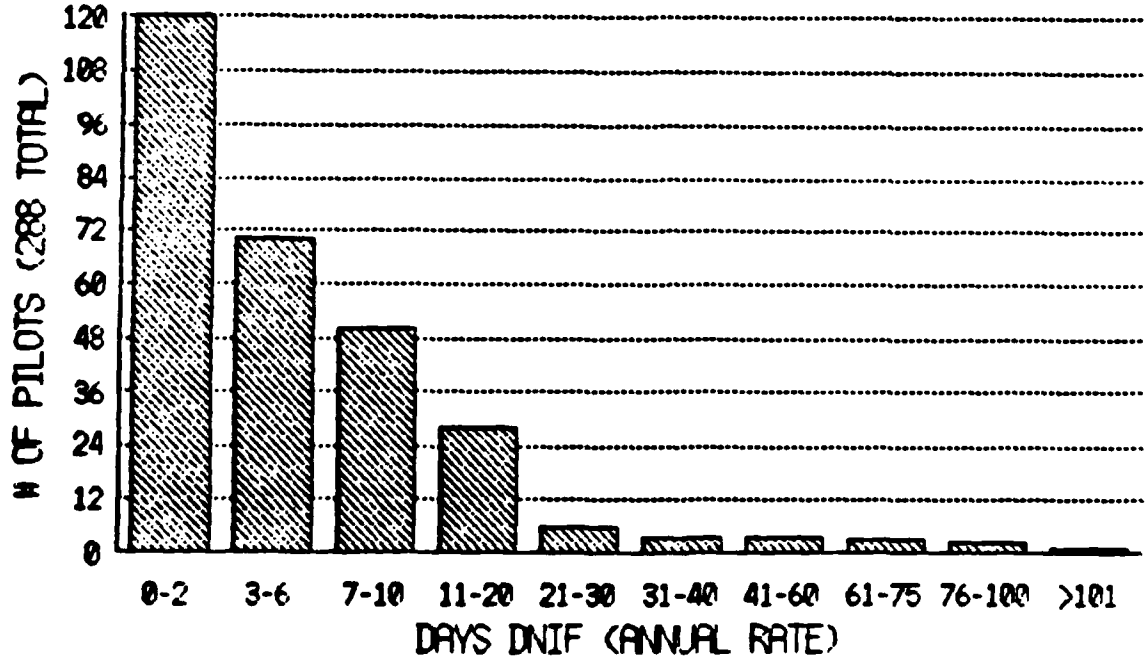
	MALE		FEMALE		RATIO
	mean days DNIF	% of group	mean days DNIF	% of group	
AGE					
20-26					
27-33					
34-40					
RANK					
Lt.					
Capt.					
Maj.					
MARITAL STATUS					
Married					
Single					

Mean Days DNIF by sex, age, rank, and marital status, and % of each group falling into each strata.

APPENDIX 4



FEMALE DAYS DNIF



MALE DAYS DNIF

SAMPLE HISTOGRAMS

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VITA

Judith Ann Vincenti Holl was born in Carbondale, Pennsylvania, on June 22, 1957, the daughter of Armand and Anne Vincenti. After graduating from Saint Rose High School, Carbondale, Pennsylvania, in 1975, she entered the University of Pittsburgh, where she was elected to Alpha Tau Delta, the national honorary nursing society. In 1977 she joined the Air Force ROTC program on full scholarship. She received the degree of Bachelor of Science in Nursing from the University of Pittsburgh in 1979 and was a distinguished graduate from the ROTC program. Upon completion of nursing state boards, she entered the USAF nurse internship program at Keesler AFB, Mississippi. In 1980, she was assigned to Maxwell AFB, Alabama, as a staff nurse on a surgical ward. Her last year at Maxwell was spent as the assistant charge nurse of the obstetric/nursery unit.

In 1981, she married Kenneth Holl of Scranton, Pennsylvania.

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